

WHAT IS CLAIMED IS:

1. A method comprising:
forming a magnetic tunnel junction including pinned and sense layers; and
re-setting a magnetization vector of at least one of the layers.
2. The method of claim 1, wherein a magnetization vector is re-set by
applying a magnetic field in a direction of interest while annealing the
junction.
3. The method of claim 1, wherein the pinned layer magnetization vector is
re-set by annealing at a temperature above the blocking temperature of the
pinned layer while applying a magnetic field in a direction of interest for the
pinned layer.
4. The method of claim 1, wherein the sense layer magnetization angle is re-
set by heating the junction above a threshold temperature for easy axis
rotation of the sense layer, while applying a magnetic field in a direction of
interest for the sense layer.
5. The method of claim 1, further comprising testing the switching
characteristics of the junction; and re-setting at least one magnetization
vector according to test results.
6. The method of claim 1, wherein both the sense layer magnetization vector
and the pinned layer magnetization vector are re-set by re-annealing.
7. The method of claim 6, wherein the magnetization vectors are re-set to
improve switching curve symmetry.

8. The method of claim 6, wherein the magnetization vectors are re-set to reduce critical switching field.
9. The method of claim 6, wherein the magnetization vectors are re-set to point in the same direction.
10. The method of claim 1, wherein the pinned layer magnetization vector is re-set to compensate for strong ferromagnetic coupling and weak antiferromagnetic coupling.
11. The method of claim 10, wherein the pinned layer magnetization vector is moved away from the sense layer magnetization vector.
12. The method of claim 10, wherein the pinned layer magnetization vector is re-set to improve switching curve symmetry.
13. The method of claim 10, wherein the pinned layer magnetization vector is re-set to reduce critical switching field.
14. The method of claim 1, wherein sense layer magnetization angle is changed independently of pinned layer magnetization angle.
15. A method comprising:
 - forming a magnetic tunnel junction including pinned and sense layers;
 - determining a desired switching curve for the junction; and
 - re-setting a magnetization vector of at least one of the layers.
16. The method of claim 15, wherein both the sense layer magnetization vector and the pinned layer magnetization vector are re-set by re-annealing.

17. The method of claim 16, wherein the magnetization vectors are re-set to improve switching curve symmetry.
18. The method of claim 16, wherein the magnetization vectors are re-set to reduce critical switching field.
19. The method of claim 16, wherein the magnetization vectors are re-set so that easy axes of the pinned and sense layers point in the same direction.
20. The method of claim 15, wherein the pinned layer magnetization vector only is re-set by re-annealing.
21. The method of claim 20, wherein the pinned layer magnetization vector is moved away from the sense layer magnetization vector.
22. The method of claim 20, wherein the pinned layer magnetization vector is re-set to improve switching curve symmetry.
23. The method of claim 20, wherein the pinned layer magnetization vector is re-set to reduce critical switching field.
24. The method of claim 20, wherein sense layer magnetization angle is changed independently of pinned layer magnetization angle.
25. A magnetic tunnel junction comprising:
 - a pinned layer having a first magnetization vector lying in a plane of the pinned layer; and
 - a sense layer having a second magnetization vector lying in a plane of the sense layer;
 - at least one of the first and second magnetization vector having been re-set to a different angle, the different angle corresponding to a desired switching curve of the junction.

26. The magnetic tunnel junction of claim 25, wherein the junction has strong ferromagnetic and antiferromagnetic coupling; and wherein both the first and second vectors have been re-set.
27. The magnetic tunnel junction of claim 26, wherein both vectors point in the same direction.
28. The magnetic tunnel junction of claim 25, wherein the junction has strong ferromagnetic coupling and weak antiferromagnetic coupling; and wherein only the first vector has been re-set.
29. The magnetic tunnel junction of claim 25, wherein the first vector is at a different angle than the second vector.
30. The magnetic tunnel junction of claim 25, wherein the magnetic tunnel junction has strong ferromagnetic coupling; and wherein at least half the switching curve is symmetric.
31. The magnetic tunnel junction of claim 30, wherein the magnetic tunnel junction also has strong antiferromagnetic coupling.